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ABSTRACT

One of a series of periodical reports from the Center, the document summarizes the research and development program of the Center's third year. The research program is directed at creating and testing the essential components of comprehensive community health care delivery systems that will increase the supply of services where they are most needed without adding to their costs. Health services research is encouraged through grants administered by a division of the Center, and its organization and research priorities are also cited. A drug-related studies program is summarized. An announcement of new publications, budgetary matters, a staff directory, and the Center's organization chart conclude the document. (AG)

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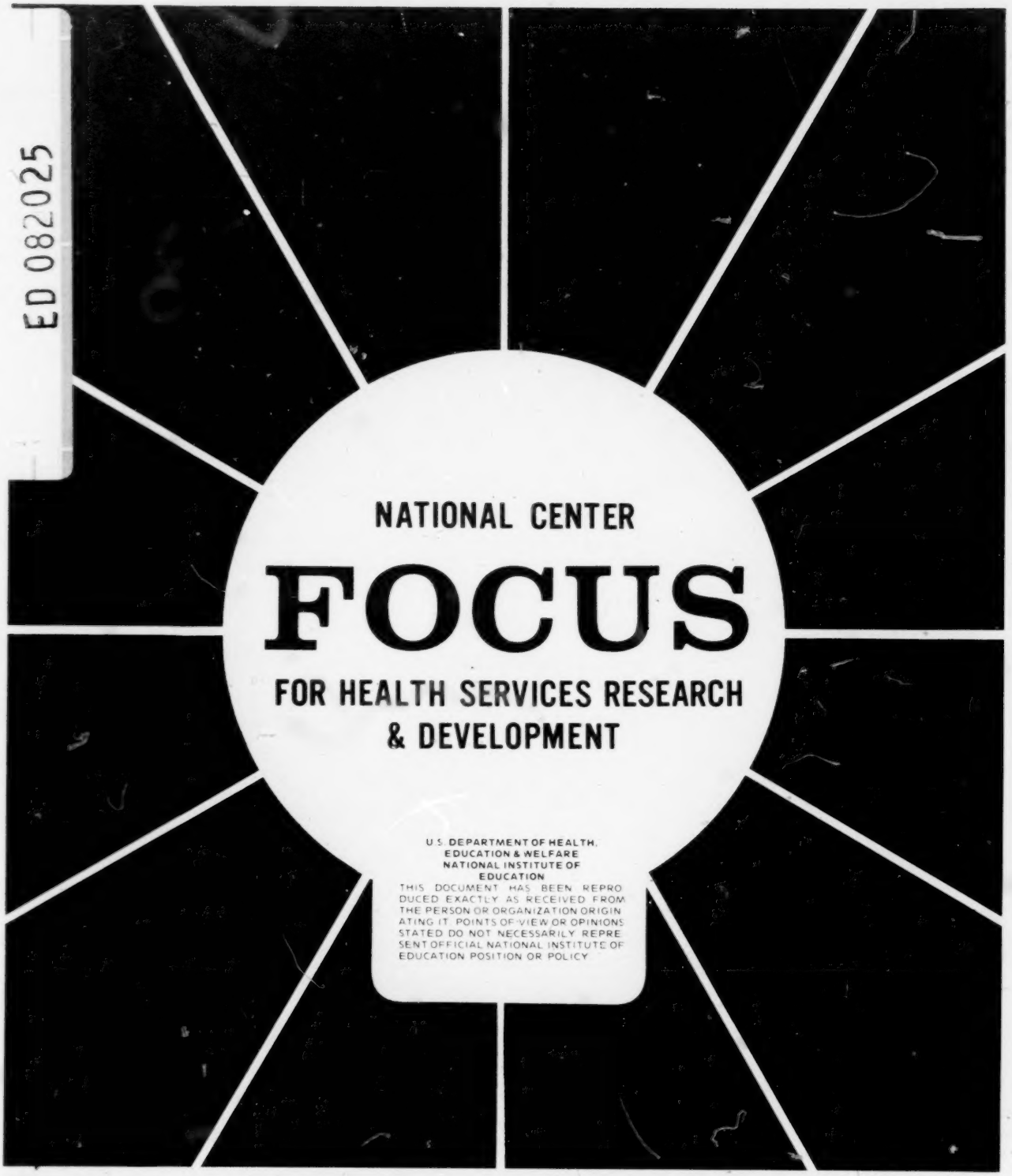

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HEALTH SERVICES & MENTAL HEALTH ADMINISTRATION

U.S. DEPARTMENT OF HEALTH EDUCATION & WELFARE

Public Health Service

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NATIONAL CENTER
FOR HEALTH SERVICES RESEARCH & DEVELOPMENT

FOCUS

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

No. 7 – Winter – 1971 Rockville, Maryland

Earlier issues of *Focus* presented the Center's major research and development programs through individual review of its Divisions and Offices. Thanks to a feature article reprinted from the September-October issue of *HSMHA World*, this issue recaps the Center's program at its third anniversary. This article describes mainly the "R&D" projects. The Center's mission also includes support of meritorious health services research, through research grants administered by the Social and Economic Analysis Division. The organization and the research priorities of this Division are published here for the guidance of investigators.

A new program, Drug-Related Studies, is completing its first year and is summarized in this issue.

This issue also carries the usual announcement of new publications, a statement on the 1972 appropriation, the budget, an updated staff directory, and an organization chart of the Center.

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AUTHORITY FOR THE CENTER

The National Center for Health Services Research and Development operates under delegation of authority contained in Section 301, the general research and training authority of the Public Health Service Act, and Section 304. The provisions of Section 304 are as follows:

SEC 304 (a) (1) The Secretary is authorized—

(A) to make grants to States, political subdivisions, universities, hospitals, and other public or non-profit private agencies, institutions, or organizations for projects for the conduct of research, experiments, or demonstrations (and related training), and

(B) to make contracts with public or private agencies, institutions, or organizations for the conduct of research, experiments, or demonstrations (and related training),

relating to the development, utilization, quality, organization, and financing of services, facilities, and resources of hospitals, facilities for long-term care, or other medical facilities (including, for purposes of this section, facilities for the mentally retarded, as defined in the Mental Retardation Facilities and Community Mental Health Centers Construction Act of 1963), agencies, institutions, or organizations or to development of new methods or improvement of existing methods of organization, delivery, or financing of health services, including, among others—

(1) projects for the construction of units of hospitals, facilities for long-term care, or other medical facilities which involve experimental architectural designs or functional layout or use of new materials or new methods of construction, the efficiency of which can be tested and evaluated, or which involve the demonstration of such efficiency, particularly projects which also involve research, experiments, or demonstrations relating to delivery of health services, and

(2) projects for development and testing of new equipment and systems, including automated equipment, and other new technology systems or concepts for the delivery of health services, and

(3) projects for research and demonstration in new careers in health manpower and new ways of educating and utilizing health manpower, and

(4) projects for research, experiments, and demonstrations dealing with the effective combination or coordination of public, private, or combined public-private methods or systems for the delivery of health services at regional, State, or local levels, and

(5) projects for research and demonstrations in the provision of home health services.

NATIONAL CENTER FOR HEALTH SERVICES RESEARCH AND DEVELOPMENT

Its third anniversary was coincidentally marked by hearings before the House Appropriations Subcommittee on Labor and HEW this spring, but the National Center for Health Services Research and Development (NCHSRD) has had more than one occasion this year upon which to examine its accomplishments and its future.

With the heightened political and public interest in health services, interest in the mission of the Center—to promote and support research and development which will lead to improved performance in the organization, delivery and financing of health services—also increases. For, in contrast to other HSMHA agencies, which support programs to provide more and better services for specific locales, the Center supports research and development directed to general aspects of health services and major national problems.

Its responsibility, as stated by Wilbur J. Cohen, Secretary of HEW at the time of the Center's establishment in 1968, is to lead the Federal effort to improve the quality and availability of health services and to find ways to help curb rising costs. Access to care, moderation of costs, and quality of care have been the guiding principles for the Center as it seeks to fulfill its role as the national focus for R&D to improve the organization, delivery and financing of health services.

The Center's research and development program is directed to creating and testing the essential components of comprehensive community health care delivery systems that will increase the supply of services where they are most needed without adding to their costs. The building blocks of total delivery systems, these components are: new types of health manpower, methods of cost containment, new forms of ambulatory care centers and services, integrated services of hospitals and other institutional providers of care, applications of cost effective technology, and data on performance of health services delivery programs.

In order for the full benefit of these innovations to be realized, they must be installed and integrated in community settings, as in the Experimental Health Services Planning and Delivery Systems, a program for which the Center has been named the lead agency. Encompassing cities, large rural areas or entire states, the Experimental Systems require establishment of a new form of community organization combining public and private interests and resources to install

technological and other forms of innovation to enhance productivity and improve distribution of health services while moderating costs and maintaining quality.

The Center conducts its programs by awarding research grants to organizations and individuals to perform studies and to conduct and evaluate demonstrations. Contracts are used to support R&D projects. Under the training program, grants are awarded to institutions and to qualified scholars for the support of research training programs in the health services field.

NCHSRD draws heavily upon the expertise and advice of recognized leaders in the medical care and health services fields. The permanent Center staff of some 240 is augmented by consultants who serve the Center through its research grant review panels, national advisory councils, numerous ad hoc advisory task forces and panels, and on an individual basis. Consumer groups, especially the disadvantaged, and youth representatives have offered valuable counsel. Through an International Invitational Conference held last year, the Center drew upon the experience of other nations as represented by leaders in health policymaking and planning from England, Scotland, Finland, Sweden, and Canada.

Manpower The augmenting of professional medical manpower with mid-level health personnel, as suggested by recent national manpower studies and reports, is one area under study by the Center.

The Center is evaluating new types of medical paraprofessionals with respect to their selection and preparation, clinical performance, supervision and acceptance by patients, physicians, and other medical workers. The Center limits its support to projects specifically designed to develop and evaluate certain categories of physician-extender manpower that provide primary and continuing health services under supervision.

The starting point for the manpower evaluation has been a program which retrains former military corpsmen, called MEDEX, to serve as physicians' assistants. MEDEX projects currently are underway in Washington State (with sites in Alaska, Montana, Oregon, and Idaho), New Hampshire (with sites in Maine, Rhode Island, Connecticut, Vermont, and Massachusetts), Alabama (with sites in Georgia, South Carolina, Louisiana, Tennessee, Florida, and Mississippi), North Dakota (with sites in South Dakota and Minnesota), Utah (with sites in Idaho, Nevada, Montana, Wyoming, and Colorado), and Watts, Calif.

Other manpower models for which uniform appraisal methods are being developed include the family nurse practitioner, pediatric nurse practitioner, school nurse practitioner, nurse midwife, and dental auxiliary.

Health Care Costs By mid-1970, each man, woman, and child in the U.S. was paying an annual average of $324 for medical care, an increase of $33 per person over the previous year. Because of these rising costs, many people find it difficult to purchase comprehensive services, or much worse, are completely denied medical care.

Any attempts to curb unnecessary increases in the cost of medical care must be based on an understanding of those characteristics of the delivery system which influence levels of efficiency and cost. For this reason, the Center supports extensive economic research directed to analyzing this growth in health care expenditures and to increasing the accuracy of economic predictions.

Unnecessary hospitalization is a generally recognized factor contributing to high medical costs. The obvious solution is to keep patients out of the hospital without compromising the quality of care they receive.

One alternative to hospitalization is increased "vertical integration" among health care facilities offering different levels of care, taking the form of agreements for appropriate patient transfer.

Barriers to putting this concept into practice are the unavailability of critical resources, such as sufficient beds for extended care and nursing home care of patients who no longer require hospitalization, and the inability to assure patients they will receive continuity of medical care.

The Center's health care financing program has recently begun a major study of the efficiency of alternative organizational forms for delivering ambulatory care, including prepayment plans, fee-for-service group practices, and solo practice. This study will later focus on the economic aspects and implications of medical organizations, use of para-professional personnel in new ambulatory care systems, and problems in defining price and productivity indices for these systems.

Economic studies are also being made of organizations considered to be the possible prototypes of future health maintenance organizations (HMO's). HMO's will concentrate on keeping people healthy by emphasizing preventive medicine, early detection and treatment of illness, and education of the public regarding all health maintenance principles that are known to be effective. The Center plans to carefully analyze the evolution of HMO's, especially with respect to the populations enrolled, benefits provided, effectiveness of care, use of services, and reactions of the users.

To make this analysis, Federally-supported HMO's will collect, retain and report critical demographic and health services data. In areas served by HMO's,

data for the HMO enrollees and the population not enrolled will be collected before and after the HMO begins operation. Similar relevant data will also be collected for geographic areas without HMO's to permit comparisons of results among HMO's, and between those served by HMO's and those not served in the same community.

Other cost studies being developed at the Center include a comprehensive analysis of the implications of various proposals for Government financing of health care, examination of the costs of care in extended care facilities, and an economic assessment of the national impact of technology on health care costs.

Health Care Facilities The Center's involvement in efforts to improve inter-facility relationships, reduce unnecessary hospitalization, and moderate the costs of hospital care—which continue to rise more rapidly than those of any other component of the health care industry—is evident in a study conducted in Phoenix, Ariz. Samaritan Health Services in Phoenix comprises nine formerly independent hospitals, now formally merged and managed under a single corporate structure.

NCHSRD is supporting a study of the Samaritan hospital system, with special attention to the efficiencies and economies that result from the sharing of medical services and the centralizing of purchasing, laundry operations, food services, computer services, laboratory testing, and other operations.

Working toward an effective alternative to high-cost hospital care, the Center supports the development of a new generation of ambulatory care centers.

One model ambulatory care system is now being tested at the Kaiser-Permanente Health Plan in Oakland, Calif. The ambulatory care process is being restructured to provide four distinct services: a Health Testing Service which uses automated health screening and other techniques to sort patients by health status and direct them to services organized and staffed to serve their specific care needs; a Health Care Service, providing health education, counselling, well-baby care, prenatal care, and other health maintenance functions; a Sick Care Service, providing traditional services and facilities to care for the ill; and a Preventive Maintenance Service, providing care for patients with chronic illness.

Because personnel salaries account for 60–70% of a hospital's budget, NCHSRD is directing a major effort to test the use of an all-inclusive rate reimbursement of hospitals which would significantly reduce personnel requirements. Instead of charging for each aspirin or urinalysis or dressing or treatment, hospitals will establish average costs in typical patient categories and then bill each patient or third-party payer the appropriate standard daily rate. Based on results of a recently completed feasibility study, savings in clerical personnel alone could amount to several hundreds of millions of dollars annually if the plan proves to be successful and can be installed nationwide.

The Center is also testing the value of data provided by use of a uniform discharge abstract and common insurance claim form for all hospital patients. Such data should facilitate analysis of hospital costs in relation to the number and types of patients served and the size and type of hospital, and, in time, will be useful in determining community needs for more hospital beds, nursing home beds and outpatient facilities.

Data Through the Center, HSMHA supports and evaluates projects whose common purpose is to produce data on the performance of health services delivery programs in improving access to care, promoting proper utilization of care, monitoring the costs of care, and maintaining surveillance of the services provided. The projected health services data system will include a health interview survey to determine the need for care and how well it is being met; a system to monitor care given in ambulatory settings; standard information on all hospital patients; and an inventory of manpower and resources similar to that now maintained on a national level by NCHS.

Working closely with the National Center for Health Statistics, NCHSRD is developing a cooperative Federal-state-local health services data system that can later be implemented and replicated in communities throughout the nation.

Effectiveness of Care Major changes in the organization, delivery and financing of care will be judged ultimately by their effect upon the quality of care, and substantial effort is therefore directed toward improving methods for assessing medical care and documenting the outcome of medical treatment.

The Center works with the American College of Physicians and the American Society of Internal Medicine to improve methods for assessing the quality of care provided by internists in the hospital and in their offices. A study recently concluded with the Hawaii Medical Association demonstrated the feasibility of sampling the content of office and hospital care and comparing the data with criteria established by local physicians. Experimental medical care review organizations are being supported with a limited number of state or local medical organizations to test alternative approaches to the systematic assessment of the quality of care.

Technology Health care technology can increase productivity and contain costs, but improperly applied it can also add remarkably to costs. At this time, little definitive knowledge is available regarding the circumstances surrounding potential costs, benefits, or possible trade-offs of technological change. The Center is

addressing itself to shedding some light on these undefined areas.

The Center supports technological R&D to extend the usefulness of the most highly skilled medical manpower For, while research is constantly uncovering new methods of diagnosis and therapy for the acutely ill patient, most of these methods are expensive in terms of both money and manpower and involve the continuous surveillance of repetitive normal data for isolated abnormal events. A nurse in an intensive coronary care unit spends 80% of her time performing patient monitoring functions and only 20% on direct patient care. NCHSRD is lending support to an experiment in which computers take over much of the monitoring activity.

Recent studies have shown that the use of a computer-assisted electrocardiogram analysis program can result in a savings of up to 75% of the time cardiologists spend in reading ECGs. A program at St. Luke's Hospital in Denver has the capacity to provide a machine diagnosis for every ECG taken in the Denver metropolitan area.

On the other hand, while a study in New Haven, Conn. is showing that the use of computers in laboratory testing improves the accuracy, speed, and economy of tests, another study in Berkeley, Calif. shows that laboratory automation is increasing costs to many hospitals, primarily because sophisticated and costly equipment is under-utilized.

Thus the task is to identify and demonstrate those settings and conditions under which health care technology can bring about meaningful reductions in the costs of services, as well as added savings in the time of expensive manpower.

Health Care Systems As noted earlier, in order to take full advantage of the innovative applications of health manpower, facilities and technology, it is necessary to install these components in communities to test their effectiveness when combined.

To provide this final test of effectiveness, the Center carefully selects community laboratories where it brings together and examines its R&D components. In each such setting, the community determines the health care requirements of its population in relation to its existing resources. On that basis, new kinds of manpower, financing arrangements, ambulatory care services, and other elements are installed and evaluated.

One of the first such model communities is the State of Rhode Island. Rhode Island Health Services Research, Inc., established a year ago, is a non-profit corporation which includes in its membership the major health interests within the state. The corporation is responsible for considering innovative revisions within the current health care delivery system, and influencing the state-wide adaption of those selected for the benefit of all Rhode Island residents.

The Center's community R&D projects are the forerunners of the HSMHA-wide effort to create experimental health services planning and delivery systems. Designating NCHSRD as its lead agency, HSMHA has launched a program to support a limited number of these systems which will serve the entire communities in which they are established.

Selected communities receive support and assistance in coordinating their public, private, and voluntary resources to design, implement, and manage a system directed to improving access to needed health services, moderating costs and assuring quality. Participating communities identify unmet requirements for care, develop alternative approaches to meeting these through improved use of manpower, technology and facilities, and develop an organizational structure to effectively direct the new system. The entire effort will be objectively assessed by development of a health services data system. Conjoint funding by HSHMA, HEW, the Office of Economic Opportunity and the Department of Housing and Urban Development, will provide the service monies.

The experimental systems will be planned and developed over a number of years, starting with the existing resources in the community and progressing toward the goal of a fully-developed, locally determined health services delivery system. This coordinated approach will eventually increase the impact of all HSMHA programs in experimental systems.

Implementation of the innovations in health services delivery systems will require training of large numbers of new types of managers and administrators and the development of research and administrative talent in health services is the prime objective of Center training programs. These new types, including physicians, hospital administrators, and others from non-health back-grounds, must be prepared to plan, initiate, operate, and evaluate evolving health services delivery systems.

During its brief history, the National Center for Health Services Research and Development has worked toward establishing a sound and systematic approach to the development of nationally applicable methods of providing a more equitable distribution of health care, reducing the rate of inflation in medical care prices, and assuring the effectiveness of care delivered.

In discussing the continuing role of the Center, Director Paul J. Sanazaro, says, "It is in the intelligent support of health services research that the Center can best discharge its long-range public responsibility to create new alternatives to improving health status through health services. In the short range, we must

use health services R&D to bring about improved distribution, cost moderation, and assurance of quality. We have only a short time in which to preserve vital options."

SOCIAL AND ECONOMIC ANALYSIS DIVISION

Objective

The goal of the Social and Economic Analysis Division (SEAD) is to promote and support the research needed to understand the basic processes of health services utilization and provision. Through this research will come new ideas for improving health services. The Division seeks to specify important issues and problems in health care delivery that require intensive research efforts, and which provide organizing themes for analysis of policy questions.

The Center's R&D Program is based upon several years of health services research; and SEAD has the continued responsibility to develop and support the underlay of research which will be the foundation for R&D of the late Seventies. This requires the knowledge of long-term trends in both the demand and need for health services as well as changes in organization, financing, delivery, and management. The output of such research is utilized in R&D and in the management of health care programs.

Analytic Framework

The Social and Economic Analysis Division encourages a multidisciplinary approach to health services research. It is felt that by viewing specific problem areas from the perspective of a number of disciplines, a more comprehensive definition of the problem is achieved. In addition, a coordinated research effort, using the methods and analytical tools of each discipline, can be developed. The Division is seeking to provide a forum in which health care problems can be approached in this fashion.

Implicit in this analytic framework is a reliance upon the theoretical structure and methods of each of the contributing disciplines. Health services research is at a stage in its development where most of the research should have a theoretical base rather than being purely descriptive. The need now is to provide the test for these theories through empirical studies in the mainstream of medical care.

Major Research Issues

The issues which require health services research typically involve one or more of the following: a) the consumer of health care; b) the provider of health care; c) the organizations or institutions for the provision of health care; and d) the larger community or context in which health care is provided. Ultimately the concern is reduced to one of attempting to maximize the effective interaction between a consumer and provider of health care.

The major research issues of this decade can be viewed in the four broad areas above and can be further elaborated around each area. The problems involving the consumer include a need to define and measure health, a need to aggregate and forecast demands for health services through analysis of morbidity and mortality trends, and lastly, a need to understand individual health behavior and the educational efforts needed to maximize the contribution of the individual to his own health. The needs of the provider include an evaluation of the extent to which educational processes are commensurate with requirements for the delivery of health services. At the institutional level definition of the role of the hospital is critical. In the larger context of health services the areas include a definition of the dynamics of developing community health systems, an evaluation of the effectiveness of present social control and regulatory activities in health care, and identification of present and potential incentives and disincentives for maximal function of both providers and consumers.

Health Care Consumer

Measurement of Health. The measurement of health has been studied in a number of ways: morbidity surveys, perceived health, functional ability and degree of vigor. A critical review of these efforts as well as consideration of other means to measure health is needed. The problems inherent to the use of such measures need to be specified and means developed to solve them through further research.

Population Trends: Morbidity and Mortality. To plan for future health services, the means to forecast changing morbidity patterns, the impact of medical innovations, larger societal changes, and population growth are required. Medical breakthroughs in the prevention and treatment of disease can drastically alter the needs for health services and must be studied to develop alternative estimates of health care resources.

Consumer Health Education. Consumer health education in today's era of "consumerism" takes on new importance. Knowledge about health and illness is derived from many sources during long periods of time. There is need to specify what we know about these various sources and the extent to which they effectively communicate health knowledge: Are there alternative methods of education which should be considered?

Health Care Provider

Professional Education Processes. The adequacy of educational activities in preparing health professionals for health care delivery responsibilities, including recruitment and selection of the most appropriate candidates for training, must be evaluated. Factors affecting choices of career and practice settings must be clarified.

Organizational Setting

Hospital Role in Health Care. The role of the hospital is evolving rapidly. An understanding of the historical role of the hospital and the multiple paths that have been followed in its development would be extremely useful in developing future research strategies. A number of models are being developed for hospitals to follow in the years ahead. These need to be specified as succinctly and explicitly as possible.

Community Context

Community Health Systems. Community health systems are becoming a reality in many communities. The types of communities where this is occurring and the dynamics of the process need to be understood. The extent of health care decision-making networks at the community level in both traditional and innovative communities needs to be specified. The techniques and methods for studying this area need to be identified and developed to apply to health care. Typologies of communities need to be developed with specific attention to health care systems to enable the extrapolation of experience to comparable communities. Comparisons of both rural and urban communities are critically needed.

Social Control and Regulation. Social control and regulation of health care has grown to the point where we find it difficult to understand or specify the extent and network of such activities. There is a real need to develop a comprehensive overview of this area in regard to the dynamics of the interrelationships between "controlled and controllers." The effectiveness of rewards and sanctions exercised through existing control mechanisms should be assessed. Strategies to study this area need to be formulated.

Incentives and Disincentives. There is little systematic information on the effect of incentives and disincentives on health care providers and consumers. The identification of present incentives and their effects need to be more clearly understood. The operation of incentives in other sectors of the economy and their probable usefulness in health care delivery need to be studied. The peculiar features of the non-profit health care industry which provide strength or barriers to effective incentive strategies need to be specified.

Social and Economic Analysis Branches

In addition to its multidisciplinary research pursuits, the Division is organized into four Branches which support and develop specific research from the perspective of the academic disciplines traditionally engaged in health services research. The four Branches are: 1) Economic Analysis; 2) Health Services Research Methods; 3) Political and Legal Analysis; and 4) Social Analysis.

Economic Analysis Branch

The Economic Analysis Branch is concerned with research on the supply and demand in health services and possibilities for removing obstacles to the optimal allocation of resources for health. Current interests fall into the following categories: (1) incentives, payment systems, and insurance; (2) economic organization of the health care industry; and (3) quantitative techniques in planning management.

Incentives, Payment Systems, and Insurance. Research is directed to production and utilization incentives under various payment systems, including national health insurance. Research questions include: How much overuse of hospitals is caused by insurance covering only hospital expenses; does essentially open-ended, cost-based reimbursement cause important waste; what are the measurable effects of closed panel group practice plans where the group takes all costs into consideration; what is the effect of co-payment on consumer demand?

Economic Organization of the Health Care Industry. Research on economic organization of the health care industry includes the implications of monopoly, the behavior of non-profit versus profit firms, the role of government intervention and the influence of information on the market for health. Research questions include: Is there monopoly in the provision of health services and, if so, what is its impact; how does a non-profit setting influence the behavior of decision-makers; what obstacles to a free market in health care should be dismantled; what is the optimum degree of government planning or regulation; what are the effects of consumer and physician information on the market for health care; what is the role of the decentralized market in producing and transmitting information?

Quantitative Techniques in Planning and Management. Research is directed to the use of such management science techniques as operations research, industrial engineering, systems analysis, and organizational behavior in the planning, and operating of health care delivery systems to improve operating efficiency and contain costs. Research questions include: How can management science techniques be

utilized to bring about organizational and operational changes; in what organizational form should such techniques be utilized; are innovations developed in one environment transferable to another; what considerations must be borne in the transfer; how can quantitative techniques be applied to area-wide planning which traditionally considers many qualitative variables?

Technology introduces a whole new challenge to health care management: Can information for decision-making be defined and presented to decision-makers in a timely and accurate fashion; can simulations be utilized by the manager/planner; and what is the cost-effectiveness of computer-based communications and operational control systems in health care facilities?

Health Services Research Methods Branch

The Health Services Research Methods Branch is responsible for improving and integrating differing disciplinary methods in the study of the delivery and organization of health services. This effort draws upon the contributions of several disciplines including biostatistics, epidemiology, psychometrics, survey research, and systems analysis. The objective of the Branch is to improve the quality of data collection and its utility in planning and managing health services.

Major interests of the Branch center upon the methods of social science research in health services. How accurately do the present instruments for measuring critical explanatory variables such as perceived health, level of health knowledge, patient satisfaction, etc., measure the postulated theoretical concepts? How can refinements be achieved in many of the dependent variables? It is clear, for instance, that gross utilization statistics mask a considerable complexity of various types of utilization with different initiating forces. Are there alternative strategies to survey research to acquire much of the data needed such as secondary data analysis? What are the various research designs that are appropriate to health services research? The uses of experimental, quasi-experimental, and other designs to answer questions need to be evaluated.

More substantively, the Health Services Research Branch is interested in 1) developing means of measuring health status in populations; 2) using epidemiological methods to answer questions about allocation and distribution of facilities and manpower; 3) forecasting requirements based on population trends; and 4) assessing required technical and manpower requirements for data systems and research.

Political and Legal Analysis Branch

The Political and Legal Analysis Branch is primarily interested in analysis of the political and legal processes as they impinge upon health care. Political analysis is required in 1) the input stage, or the arousal of concern by various publics (e.g., consumers, providers, public agencies, citizens groups, etc.); 2) the changing role of government in the area of health services, with particular emphasis on the outputs of public policy, and which interests were responsible for these policies; and 3) the continuing conflict generated over how government should exercise its role, with focus on the feedback processes in the community and in public agencies.

Specific research questions requiring empirical political analysis include the following: What are the political characteristics of communities which initiate innovations in the delivery and organization of health care? How does this decision-making process operate? What is the role of various power structures in these communities and what sort of conflicts, rivalries, and alignments occur? What is the political role of organized medicine in such areas as licensure, medical education, the use of paraprofessional personnel, health insurance, and group practice plans? What are the political dimensions in health care planning? Which groups or individuals are included in the planning process and whose goals or priorities are accepted?

The legal implications of national licensure and certification require study, including incorporation of professional standards of practice into law. The changing structure of medical practice resulting in evolving forms of corporate medical practice presents problems of legal responsibility and liability. The implications of various legal incorporating documents need to be studied. The evolution of government and quasi-governmental control activities in relation to the health care industry require political and legal analysis. For example, what are the legal implications for liability and responsibility of community health planning activities and the authority for such activities?

Social Analysis Branch

The Social Analysis Branch seeks to understand the dynamics of the interrelationship between the providers and consumers of health care in specific organizational settings and the variables which affect this interaction. Major interest centers upon 1) consumer behavior, 2) professional behavior, 3) organizational behavior, and 4) community behavior.

Consumer Behavior. Primary concern is focused on identifying and quantifying the essential components of consumer behavior (the ethnic and cultural biases that determine utilization and satisfaction levels) and

on the form and sources of [illegible] that shape individual attitudes toward [illegible] and illness. What is the impact of family, [illegible] peer group, and health care institutions on [illegible] utilization? Correlation of previous research [illegible] the consequent synthesis of testable hypotheses would permit the early prediction of utilization patterns.

Professional Behavior. The forces that influence provider behavior, including the identification of strengths and weaknesses in effective functioning, require study. The impact of medical education and training, as opposed to organizational re-structuring, to obtain compliance with professional standards is an area of needed attention.

Organizational Behavior. These studies focus on organizational trends and patterns and their effect on efficiency and effectiveness. The extent and desirability or inter-organizational linkages among organizations require better understanding.

Intra-organizational studies are needed which examine the diffusion and impact of technology upon institutional efficiency, particularly the effect of hospital information systems upon communications channels.

Community Behavior. Community variables related to the provision of health care are of special interest. These include decision-making related to health care, and particularly an understanding of the catalysts, impediments, and sustaining forces that determine the acceptance of health care at the community level.

OFFICE OF DRUG-RELATED STUDIES

With the appointment of Dr. Donald C. Brodie as Director, a Drug-Related Studies Program was instituted in the Center on July 1, 1970. Dr. Brodie joined the Center staff on assignment by the University of California, San Francisco, following the publication of his study, "Drug Utilization and Drug Utilization Review and Control," commissioned earlier by the Center.

The program initially will be concerned with 1) implementing the recommendations of the drug utilization study, 2) reacting to the sentiments expressed at the Conference on Pharmacy Manpower, cosponsored by the National Center and the University of California School of Pharmacy, September 10-12, 1970, and 3) integrating the above into an ongoing program consistent with the mission of the Center. Most of the program activities will be conducted through the use of grants and contracts. In addition, Task Forces and individual consultants will be appointed to provide advisory services for developing program, strategy, and projects.

The first Task Force appointed was charged with developing a set of working criteria for a clinical role for the pharmacist. This was in response to one of the mandates of the San Francisco Conference and is considered a preliminary step toward evaluating the effectiveness and cost feasibility of a clinical role. Other roles for the pharmacist will be studied.

The philosophical framework for the drug-related studies program is based on two assumptions. ***First,*** the drug component of health care is an essential component; *second,* the drug component is provided through two functions: a) procurement and distribution, and b) the assurance of quality, safety, and effectiveness.

The major areas of interest in the drug studies program are *manpower;* the *arrangements* by which drug-related services are provided; the *utilization* of drug-related services and the factors that influence utilization; and *quality assurance* and *cost control.* A fifth component, education, is seen as the unifying area of concern.

Priorities will be determined according to such criteria as 1) innovative procedures, 2) improved use of manpower, 3) improved availability of services, 4) improved cost control, 5) evaluation of and improvement in the quality of services and health care, and 6) interdisciplinary involvement.

Mrs. Joe B. Graber, serves as Special Assistant to Dr. Brodie. Inquiries concerning grant and contract support available to conduct studies in the cited areas should be addressed directly to either Dr. Brodie or Mrs. Graber.

[Ed. Note: Three drug-related publications have been issued by the Center:

- Report of Task Force on the Pharmacist's Clinical Role in *HSRD Briefs No. 4.*
- Challenge to Pharmacy in the 70's: Proceedings of an Invitational Conference on Pharmacy Manpower.
- Drug Utilization and Drug Utilization Review and Control.]

A STATEMENT ON THE BUDGET

In Fiscal Year 1971, the Center funded the following projects:

	Number of Awards	Total Amount (in millions)
Grants:		
Research	154	$22.6
Training	51	3.9
Fellowships	85	.7
Contracts	124	24.4
Direct Operations	—	6.1
TOTAL	414	57.7

The 1972 appropriation totals $62,070,000, of which $55.2 million is for grants and contracts, a program increase of $3.6 million over the 1971 level. The increase provides $1.6 million to be used to support R&D leading toward a cooperative Federal-State-local health services data system to be carried out in cooperation with the National Center for Health Statistics through projects in selected communities, States, and regions. The 1972 amount also includes $2.0 million to support development and evaluation of health maintenance organizations. The Center will analyze the evolution of HMOs especially with respect to the populations enrolled, benefits provided, effectiveness of care, use of services, and legal and market factors.

NEW PUBLICATIONS

The Center, through its office of Scientific and Technical Information, reviews, publishes, announces, and disseminates the results of health services research and development. Publications are principally general and technical research reports, occasional papers, commissioned state-of-the-art monographs, review articles, and symposia proceedings.

The Center arranges for the reproduction, announcement, and distribution of reports through the National Technical Information Service. Most reports are available at $3.00 in paper or $0.95 in microfiche. Order by Report No. (PB or HSRD) or title, make checks payable to NTIS, and mail directly to:

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General Reports

- *The Rising Cost of Hospital Care:* Feldstein, M. S.: Information Resources Press, Washington, D.C. October 1971, 80 p. This study, originally commissioned by the Center on the recommendations of its Publications Advisory Board, is being printed and distributed by Information Resources Press through a contractual agreement with the Government. Dr. Feldstein, Professor of Economics, Harvard University, is a former member of the economics faculty at Oxford University (England). He has specialized over the years in economics of the public sector. His most recent book, *Economic Analysis for Health Service Efficiency,* was published by Markham Publishing Co. in 1967. He has authored approximately 35 papers dealing with many aspects of economic analysis, and most particularly, economics of the public sector. He is a member of the National Institute of Medicine of the National Academy of Sciences, and an economic advisor to the Department of Health, Education, and Welfare. *The Rising Cost of Hospital Care* is a definitive analysis of the rates and causes of upward changes in the costs of hospital care, based on rigorous statistical and cost analysis techniques. It deals with the basic statistics of hospital cost inflation, the effects of increased demand, the effects of changing technology, and the effects of rising wage rates.

- *Catalog of Health Services Research: Abstracts of Public and Private Projects (1967–70);* Science Information Exchange, Smithsonian Institution, Washington, D.C., November 1971, 300 p. This document is a six-index, comprehensive listing of research and demonstration projects directed to the improvement of health care services. It is offered as a ready reference to the major areas of research, and the principal investigators and institutions directing and supporting the work. The Catalog, which places a particular emphasis on social and economic research is the successor to *Health Economics Studies Information Exchange* (HESIE) published in 1968 by the Health Economics Branch of DHEW, HESIE, in turn, was the successor to *An Inventory of Social and Economic Research in Health,* published by the Health Information Foundation of New York City, under the direction of George Bugbee and Odin Anderson. The project data sheets and the indices were prepared by the Science Information Exchange of the Smithsonian Institution, the principal repository of information on current research and development. The definition of search areas and the selection of projects was done by Jeremiah J. German of the Department of Public Health Administration, Johns Hopkins School of Hygiene and Public Health.

- *Provisional Guidelines for Automated Multiphasic Health Testing and Services. Volume 3;* Proceedings of the Invitational Conference on AMHTS, Washington, D.C., January 21–23, 1970, 401 p. [November 1971] This, the Center's concluding volume on AMHTS, presents the documentation used by the AMHTS Advisory Committee to support the recommendations advanced in volumes 1 and 2, and because it is a voluminous backup document, it will be released in limited numbers. Section headings are: The Uses and Purposes of AMHTS in Health Care (health maintenance, patient surveillance, diagnostic adjuncts); Technology in AMHTS (automated instruments and their maintenance, clinical laboratory instrumentation, pattern recognition, data processing requirements, physical

facilities, total systems design and analysis, government-industry interrelationships in AMHTS); Human Factor in AMHTS (the health care structure and AMHTS, consumer and provider acceptance, customizing screening programs through communications transactions); Cost and Cost Analysis in AMHTS (predicting capital and operating costs by plant, staff, tests, and patient selection and load).

- *University Medical Care Programs. Conference:* Densen, P. M. (ed.); Health Services Research Center, Harvard Medical School, Boston, October 1970, 146 p. The conference hypothesis was that the curricula of university teaching hospitals needed to be updated to reflect new attitudes toward health care and the new systems that are providing that care. Principal papers reviewed and evaluated the use of teaching hospitals as community health centers and the sources of available funds; the quality of care in such centers; the teaching benefits of such centers; and the role of the university in shaping major, innovative ways of better delivering health care.

Published Technical Reports

- *Provisional Guidelines for Automated Multiphasic Health Testing and Services. Volumes 1 and 2:* Report of the AMHTS Advisory Committee to the National Center for Health Services Research and Development, September 1971, 141 p. Report No. HSRD 71-24. This is a combined reprint of volumes 1 and 2 of a 3-volume series titled "Provisional Guidelines for Automated Multiphasic Health Testing and Services," prepared by the Center's AMHTS Advisory Committee. Volume 1 presents provisional guidelines for planners. Volume 2 reviews operational principles and quality control.

  [*Note:* Automated Multiphasic Health Testing and Services (AMHTS) is the use of automated tests and measures to detect probable early (presymptomatic) disease and the need for consequent diagnostic examinations and services. AMHTS has been principally developed and used by industrial and prepaid group health plans as an expeditious way of providing preventive health care. NCHSRD is determining the feasibility of adopting AMHTS to Federal health programs and is conducting long-term epidemiological, biomedical, economic, behavioral, and technologic investigations.]

  An Invitational Conference on Pharmacy Manpower. Proceedings: Graber, J. B. and Brodie, D. C. (eds.); National Center for Health Services Research and Development, September 1971, 171 p. Report No. HSRD 71–21. The conference thesis was that pharmacists are professionally under utilized, despite the shortage of health manpower, but that new, essentially clinical roles, are emerging as the nation enters a period of comprehensive health care. These roles, which will depend on new pharmacist-physician relationships, must be identified, studied, and then demonstrated. Pharmacy school curricula, which have been static for some time, will have to reflect the expanded function of the pharmacist. Conference proceedings emphasized the changing role of the pharmacist; the redefinition of the pharmacist role; the physician/pharmacist team in patient care; the pharmacist's role in drug efficacy control, educational programs for pharmacists; compatability of physician and pharmacist education; and pharmacy and the health care enterprise.

- *Drug Utilization and Drug Utilization Review and Control:* Brodie, D. C.; University of California, San Francisco Medical Center, Rev. ed.; September 1971, 47 p. Report No. HSRD 71–22. Dr. Brodie, now at the National Center for Health Services Research and Development, reviews the major problems created by our increased dependence on prescription drugs and their escalating costs. He discusses physician prescribing patterns; the lack of knowledge of drug action on the sick; increased drug utilization and its cost implications; inefficient utilization of manpower in drug dispensing; and drug misuse. The report concludes with specific recommendations on the role of R&D in mitigating the major health problem created by the misuse of prescription drugs: a) creation of a national center to collect, interpret, and disseminate statistics on drug utilization; b) operation of an office within the Center that would establish broad policies in drug utilization research, and research priorities, and coordinate the research of the federal agencies with interests in drug-related areas; and establishment of four, university-based regional centers directed to interdisciplinary research in the drug aspects of health services.

- *Home Aide Service and the Aged: A Controlled Study. Part I: Design and Findings. Part II: The Service Program:* Nielsen, M. and Beggs, H.; Benjamin Rose Institute, Cleveland, PHS Grant No. CH 00385; August 1970, 305 p. Report No. PB 201 373. Hypothesis: There is a negative association between institutionalization and survival among older persons which prevails even when the physical condition is held constant. Corollary Hypothesis: For older persons residing in their own

homes and not in need of intensive nursing care, provision of organized home aide service will prevent or delay institutionalization and thereby increase their chances for survival as compared with an equivalent group who do not receive such service. Findings: survival equal; contentment favored the service group and fewer days of institutionalization in a long-stay facility among service participants. Recommendations: Home aide service programs should be further developed for women and non-stroke patients. Results indicate continued research would be useful on the relationships between home aide service and the presence or absence of a friend or family member in the home as this study showed the presence of these two factors significantly reduced institutionalization.

- *Hospital System Design Simulation:* Au, T., Parti, E. W., and Wong, A. K. C.; Department of Civil Engineering, Biotechnology Program, Carnegie-Mellon University, Pittsburgh, PHS Grant No. HS 00073; August 1970. 196 p. Report No. PB 201 132. This is the first major study on the addition of system design to computer simulation in hospital design. System design permits the use of data from all sources, unlike earlier studies (computer simulation alone) which used only hospital generated data. The new method permits free response of design to function. The old permitted only limited modification of existing design.

- *Scientific Design of a Hospital Training System:* Kasaba, R. and Abato, B.; Holy Cross Hospital, San Fernando, Calif., PHS Grant No. HS 00118, September 1970, 178 p. Report No. PB 201 406. The typical hospital service employee lacks standardized training and he stays for a short time. His replacement, though bearing the same job title, may have very different skills. Hospitals must respond by codifying jobs and providing the in-house training to adequately fill them. This study, done by a general hospital, is based on definition of the total hospital functional structure and identification of its work components. It provides: 1) performance standards, 2) methods for measuring performance, and 3) training programs to meet measured needs.

- Teleconsultation: *A New Health Information Exchange System:* Bird, K. T., Clifford, M. H., Dwyer, T. F., et al.; Massachusetts General Hospital, Boston, PHS Grant No. 19487; May 15, 1970, 62 p. Report No. PB 201 407. Teleconsultation is the exchange of clinical information between widely separated health professionals, i.e., ambulance and hospital. This study develops the circuitry and support systems needed to demonstrate practicality, and identifies the professional linkages needed to make teleconsultation an accepted part of health delivery systems.

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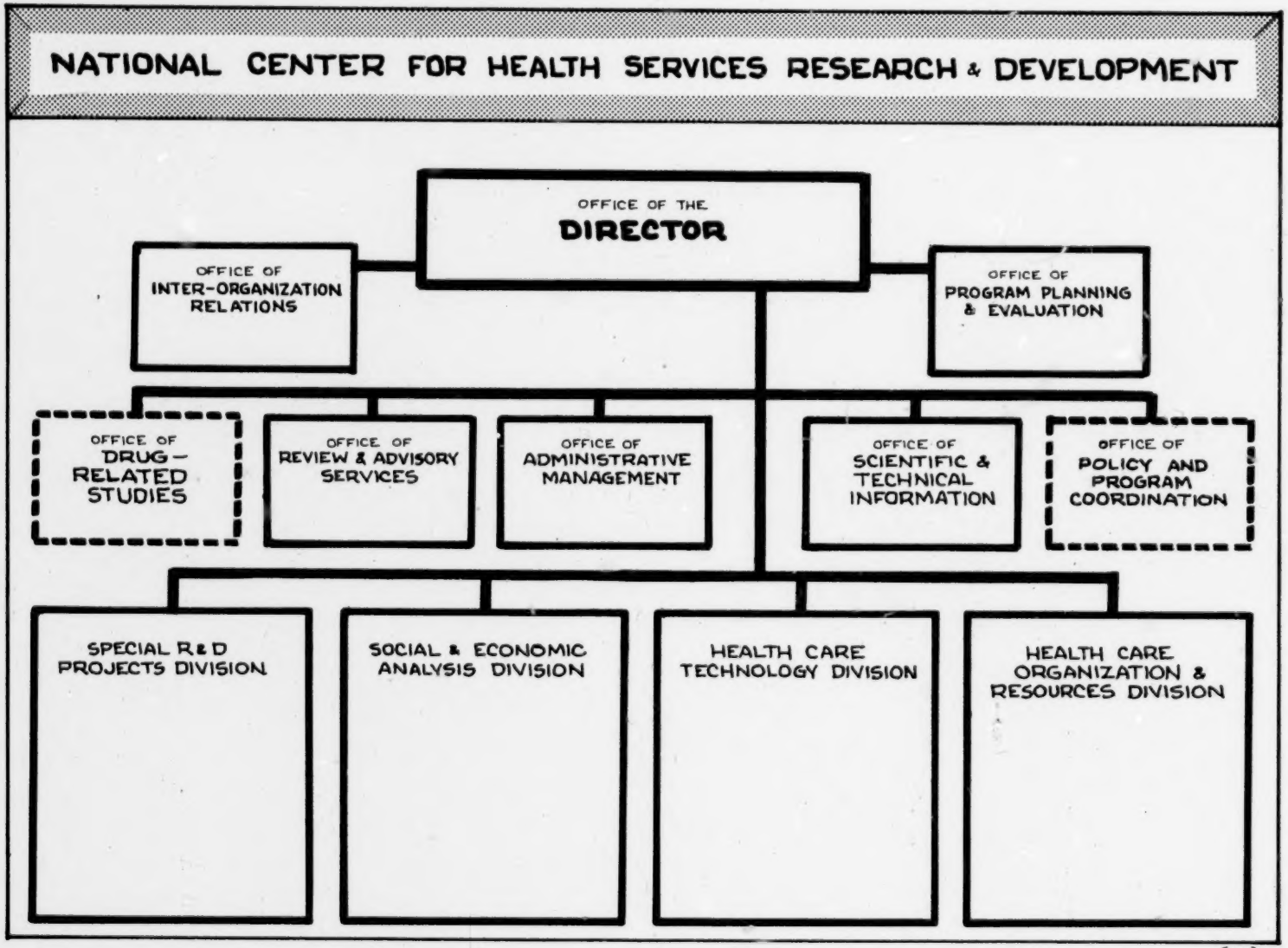

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